I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. PTO/SB/05 (08-03) Approved for use through 07/31/2006. OMB 0651-0032 U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE Signature of person mailing paper or fee: Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. 31075-128 Attorney Docket No. UTILITY PATENT APPLICATION Jingsong Xia First Inventor Adaptive Equalizer Having a Variable Step Size Influenced by TRANSMITTAL Title Output from a Trellis Decoder EL 984271132 US (Only for new nonprovisional applications under 37 CFR 1.53(b)) Express Mail Label No. Mail Stop Patent Application APPLICATION ELEMENTS Commissioner for Patents ADDRESS TO: P.O. Box 1450 See MPEP chapter 600 concerning utility patent application contents. Alexandria VA 22313-1450 S D CD-ROM or CD-R in duplicate, large table or (Submit an original and a duplicate for fee processing) Computer Program (Appendix) Applicant claims small entity status. Nucleotide and/or Amino Acid Sequence Submission See 37 CFR 1.27. (if applicable, all necessary) 3. 🔽 [Total Pages\_22 Specification Computer Readable Form (CRF) (preferred arrangement set forth below) - Descriptive title of the invention Specification Sequence Listing on: Cross Reference to Related Applications - Statement Regarding Fed sponsored R & D CD-ROM or CD-R (2 copies); or - Reference to sequence listing, a table, or a computer program listing appendix - Background of the Invention Paper - Brief Summary of the Invention Brief Description of the Drawings (if filed)
 Detailed Description Statements verifying identity of above copies ACCOMPANYING APPLICATION PARTS - Claim(s) - Abstract of the Disclosure 9. 1 Assignment Papers (cover sheet & document(s)) 4. Drawing(s) (35 U.S.C. 113) [Total Sheets 10 37 CFR 3.73(b) Statement │ Power of 10. (when there is an assignee) Attorney [Total Sheets 3 5. Oath or Declaration English Translation Document (if applicable) a. Newly executed (original or copy) Information Disclosure Statement (IDS)/PTO-1449 Copies of IDS 12. 🗸 Citations Copy from a prior application (37 CFR 1.63(d)) 13. 🔽 Preliminary Amendment (for continuation/divisional with Box 18 completed) Return Receipt Postcard (MPEP 503) 14. 7 (Should be specifically itemized) **DELETION OF INVENTOR(S)** Certified Copy of Priority Document(s) Signed statement attached deleting inventor(s) (if foreign priority is claimed) name in the prior application, see 37 CFR 16. 🗀 Nonpublication Request under 35 U.S.C. 122 1.63(d)(2) and 1.33(b). (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent. Application Data Sheet. See 37 CFR 1.76 17. E Other: ..... 18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76: of prior application No.: 09/875,720 Continuation Continuation-in-part (CIP) Examiner Khanh C. Tran Art Unit: 2631 For CONTINUATION OF DIVISIONAL APPS only; The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts. 19. CORRESPONDENCE ADDRESS Customer Number: Correspondence address below Name Troy J. Cole Bank One Center/Tower Address 111 Monument Circle, Suite 3700 City State IN Zip Code Indianapolis 46204-5137 Country Fax Telephone (317) 634-3456 United States of America (317) 637-7561 Name (Print/Type) Troy J. Cole Registration No. (Attorney/Agent) | 35,102 Signature Date November 4, 2003

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	Compl t if Known				
FEE TRANSMITTAL	Application Number	Not Yet Assigned			
for FY 2004	Filing Date	November 4, 2003			
Effective 10/01/2003. Patent fees are subject to annual revision.	First Named Inventor	Jingsong Xia			
	Examiner Name				
✓ Applicant claims small entity status. See 37 CFR 1.27	Art Unit				
TOTAL AMOUNT OF PAYMENT (\$) 425.00	Attorney Docket No.	31075-128			

METHOD OF PAYMENT (check all that apply)	FEE CALCULATION (continued)					
Check Credit card Money Other None	3. ADDITIONAL FEES					
Deposit Account:	Large Entity   Small Entity					
Deposit CO COCC	Fee	Fee		Fee (\$)	Fee Description	Con Doid
Account   23-3030	Code 1051	(*) 130	2051		Surcharge - late filing fee or oath	Fee Paid
Number Deposit	1052	50	2052		Surcharge - late provisional filing fee or	
Account Name Woodard, Emhardt, et al.	1002	30	2002		cover sheet	
The Director is authorized to: (check all that apply)	1053	130	1053		Non-English specification	
Charge fee(s) indicated below	1812		1812	-,	For filing a request for ex parte reexamination	
Charge any additional fee(s) or any underpayment of fee(s)	1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
Charge fee(s) indicated below, except for the filing fee	1805	1,840*	1805	1,840*	Requesting publication of SIR after	
to the above-identified deposit account.		· i			Examiner action	
FEE CALCULATION	1251	110	2251	55	Extension for reply within first month	
1. BASIC FILING FEE	1252	420	2252	210	Extension for reply within second month	
Large Entity Small Entity Fee Fee Fee Fee Description Fee Paid	1253	950	2253		Extension for reply within third month	
Fee Fee Fee Fee Paid Code (\$) Code (\$)	1254	1,480	2254	740		
1001 770 2001 385 Utility filing fee 385.00	1255	2,010	2255	1,005	Extension for reply within fifth month	
1002 340 2002 170 Design filing fee	1401	330	2401	165	Notice of Appeal	
1003 530 2003 265 Plant filing fee	1402	330	2402	165	Filing a brief in support of an appeal	
1004 770 2004 385 Reissue filing fee	1403	290	2403	145	Request for oral hearing	
1005 160 2005 80 Provisional filing fee	1451	1,510	1451	1,510	Petition to institute a public use proceeding	
SUBTOTAL (1) (\$) 385.00	1452	110	2452	55	Petition to revive - unavoidable	
	1453	1,330	2453	665	Petition to revive - unintentional	
2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE Fee from	1501	1,330	2501	665	Utility issue fee (or reissue)	
Ext <u>ra Claims below</u> Fee Paid	1502	480	2502	240	Design issue fee	
Total Claims 8 -20** = 0 X = 0	1503	640	2503	320	Plant issue fee	
	1460	130	1460	130	Petitions to the Commissioner	
Multiple Dependent =	1807	50	1807	7 50	Processing fee under 37 CFR 1.17(q)	
Large Entity   Small Entity Fee Fee   Fee Fee Fee Description	1806	180	1806		Submission of Information Disclosure Stmt	
Code (\$) Code (\$)	8021	40	8021	1 40	Recording each patent assignment per property (times number of properties)	40.00
1202 18 2202 9 Claims in excess of 20	1809	770	2809	385	Filing a submission after final rejection	
1201 86 2201 43 Independent claims in excess of 3	4040	776	0044		(37 CFR 1.129(a))	<u> </u>
1203 290 2203 145 Multiple dependent claim, if not paid 1204 86 2204 43 ** Reissue independent claims	1810	770	2810	J 385	For each additional invention to be examined (37 CFR 1.129(b))	
1204 86 2204 43 ** Reissue independent claims over original patent	1801	770	2801	385	Request for Continued Examination (RCE)	
1205 18 2205 9 ** Reissue claims in excess of 20 and over original patent	1802	900	1802	900	Request for expedited examination of a design application	
SUBTOTAL (2) (\$) 0	Other fee (specify)				<u> </u>	
**or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if greater; For Reissues, see above **or number previously paid, if						0

(Complete (if applicable)) SUBMITTED BY Registration No. (317) 634-3456 35,102 Telephone Name (Print/Type) Troy J. Cole (Attorney/Agent) November 4, 2003 Date Signature

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USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.